

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number  
**WO 2004/043116 A1**

(51) International Patent Classification?: **H05B 33/12,**  
33/22, 33/26

(21) International Application Number:  
PCT/IB2003/004755

(22) International Filing Date: 28 October 2003 (28.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
102 51 583.2 6 November 2002 (06.11.2002) DE

(71) Applicant (for DE only): **PHILIPS INTELLECTUAL  
PROPERTY & STANDARDS GMBH** [DE/DE]; Stein-  
damm 94, 20099 Hamburg (DE).

(71) Applicant (for all designated States except DE, US):  
**KONINKLIJKE PHILIPS ELECTRONICS N.V.**  
[NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven  
(NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BECHTEL,**  
**Hans-Helmut** [DE/DE]; c/o Philips Intellectual Property  
& Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).  
**MARTYNOV, Yourii** [NL/DE]; c/o Philips Intellectual  
Property & Standards GmbH, Weissshausstr. 2, 52066

Aachen (DE). **BUSSELT, Wolfgang** [DE/DE]; c/o Philips  
Intellectual Property & Standards GmbH, Weissshausstr. 2,  
52066 Aachen (DE). **GROEN, Wilhelm, Albert** [NL/DE];  
c/o Philips Intellectual Property & Standards GmbH, Weis-  
shausstr. 2, 52066 Aachen (DE). **HUPPERTZ, Petra**  
[DE/DE]; c/o Philips Intellectual Property & Standards  
GmbH, Weissshausstr. 2, 52066 Aachen (DE).

(74) Agent: **MEYER, Michael**; Philips Intellectual Property &  
Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,  
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,  
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

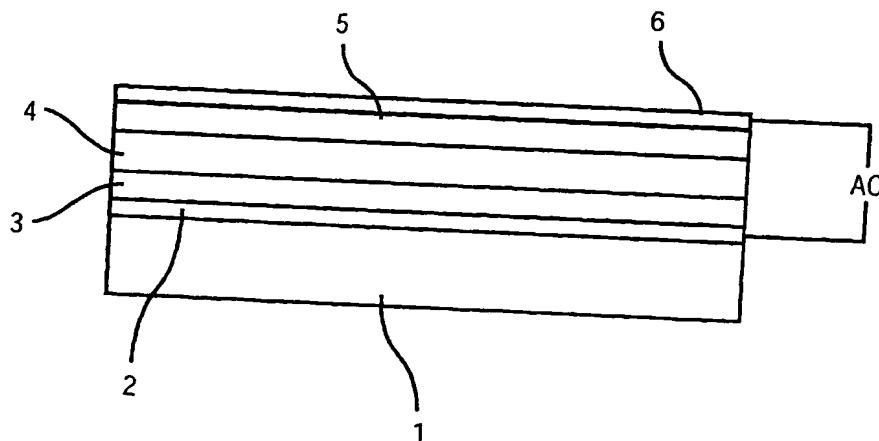
(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR). OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: **DISPLAY DEVICE WITH VARISTOR LAYER**



(57) Abstract: The invention relates to a display device comprising a first electrode (2) and a second electrode (6), and an optical layer (3) arranged between the electrodes (2, 6), which optical layer (3) emits light under the influence of an electric field applied between said electrodes (2, 6), and comprising a varistor layer (5) which is situated at least in the area of the pixels of the display device.

WO 2004/043116 A1

**WO 2004/043116 A1**



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*